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NPI-6

Administrative Procedure

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Revision History

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PA-AP-01216, R0	09/29/2020	New	Procedure developed for use by AK Technologist, which is a new job category within NPI-6

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1.0 INTRODUCTION

Process acceptable knowledge (AK) is a waste stream characterization method that can be used to meet all or part of the waste analysis requirements appropriate for the waste. The method may include documented knowledge of process (KOP), additional characterization data, and/or facility records of analysis. LANL will use process AK to ensure chemical compatibility; assign matrix parameter categories and Environmental Protection Agency (EPA) hazardous waste numbers (HWNs) commonly referred to as EPA codes to waste streams; and determine the waste material parameters and radionuclides present in waste streams. The *WIPP Quality Assurance Program Plan* (QAPP) and the LANL Hazardous Waste Facility Permit (HWFP), Section 2.4 [EPA ID number NM0890010515] define AK and provide guidelines on how AK should be obtained and documented.

All legacy items and newly generated waste information are captured through process procedures, interviews, and other source documents and are incorporated in the Acceptable Knowledge Reports (AKRs). Originators will identify legacy waste items residing at Technical Area (TA)-55 and the Chemistry and Metallurgy Research (CMR) facility that no longer have any programmatic value for disposition through processing and/or discard as waste. TA-55 FOD personnel strive for accurate waste characterization for compliance with LANL's HWFP issued by the New Mexico Environment Department (NMED). The AK specialist/technologist (AKS/AKT) performs a chemical compatibility evaluation, hazardous waste determination, and applies the most conservative set of EPA codes.

The hazardous waste codes applied in the AKRs are also grouped as Group A, which has no EPA hazardous waste codes. Group B has D004-D011 hazardous waste codes. Group D includes D004-D011, D018, D019, D021, D022, D035, D038, D039, D040, F001, F002, and F005 (D043 and F004 apply only at the CMR). The Acceptable Knowledge Profile Summary List for waste item level characterization can be found in the Waste Compliance and Tracking System (WCATS) under the Reports tab.

1.1 Purpose

The purpose of this document is to provide guidance on how AK information is gathered and documented to facilitate safe, compliant disposal of transuranic (TRU) waste at the WIPP. This procedure is used primarily by qualified Acceptable Knowledge Technologists.

1.2 Scope

This procedure applies to AK work performed by the AK Technologist in support of TA-55 FOD facilities.

1.3 Applicability

The requirements of this procedure must be implemented for AK documentation written and managed to support the management of TRU waste in facilities operated by the TA-55 FOD.

1.4 Technical Safety Requirements (TSRs)

Not Applicable

1.5 Basis for Use Categorization/Sequence of Steps

This procedure is designated as a reference procedure, due to all activities being low hazard, administrative activities and because it relies on the training and expertise of the performers for successful performance.

The major sections of this procedure are normally performed in the sequence provided, but may be pre-selected for accomplishment independently or in parallel as directed by the PIC/FLM.

2.0 TRAINING AND QUALIFICATION

This procedure must be performed by a qualified Transuranic Waste Acceptable Knowledge Technologist.

3.0 DEFINITIONS AND ACRONYMS

3.1 Definitions

Term	Definition
Acceptable Knowledge	Refers to applying knowledge of the waste based on materials or processes used to generate the waste. Acceptable knowledge includes information regarding the physical form of waste, the base materials composing waste, the nature of the radioactivity present, and the process generating waste. Acceptable knowledge is used to assign matrix parameter categories and EPA hazardous waste numbers to waste streams and to determine the waste material parameters and radionuclides present in waste streams. The collection and use of acceptable knowledge information applies to both retrievably stored and newly generated waste streams.
Acceptable Knowledge Report	A product produced by the AKSs to document the AK for a particular program/facility. This finished, summarized document can be provided to external organizations with a need to know.
Defense program (DP) waste/Non-defense program waste	As defined by the Nuclear Waste Policy Act, these activities include any activity of the Secretary of Energy, performed in whole or in part, in carrying out any of the following functions: <ul style="list-style-type: none"> • Naval reactors development; • Weapons activities including defense inertial confinement fusion; • Verification and control technology; • Defense nuclear materials production; • Defense nuclear waste and materials byproduct management; • Defense nuclear materials security and safeguards and security investigations; and • Defense research and development. Any TRU waste generated in whole or in part from any of these activities is defense programs waste.

3.1 Definitions (continued)

Term	Definition
Low-Level Radioactive Waste (LLW)	Radioactive waste that is not high-level waste, spent nuclear fuel, transuranic waste, byproduct material (as defined in section 11e. (2) Of the Atomic Energy Act of 1954, as amended), or naturally occurring radioactive material.
Non-conformance report (NCR)	A notice of deficiency written by NPI-6 to document noncompliance with waste requirements. Corrective actions must be completed before disposal to remediate the non-conformance and to prevent reoccurrence in the future.
Non-Routine Waste	Legacy waste and/or dismantling glove boxes, etc.
Non-Routine Programmatic Waste	Currently processed waste that does not meet Safeguards Termination Limits.
Resource Conservation and Recovery Act (RCRA) (40 CFR 260 268)	Federal law mandated by EPA and defined as Code of Federal Regulations (CFR) generation, storage, accumulation, treatment, packaging, transportation, and ultimate disposition of solid and hazardous waste.
Transuranic (TRU) Waste	Waste of more than 100 nanocuries of alpha-emitting transuranic isotopes per gram of waste, with half-lives greater than 20 years, except for: 1) high-level radioactive waste; 2) waste that the DOE Secretary has determined, with the concurrence of the EPA Administrator, does not need the degree of isolation required by the disposal regulations; or 3) waste that the Nuclear Regulatory Commission (NRC) has approved for disposal on a case-by-case basis in accordance with 10 CFR Part 61 (see Pub. L. 102-579, § 2(18) (1992)).
Treatment	The LANL Hazardous Waste Facility Permit and RCRA regulations prohibit “treatment” (definition 40 cfr 260.10) without a permit.
Waste Compliance and Tracking System (WCATS)	The institutional electronic system for generating a waste container data package. Also, the institutional official record of waste container information.
Waste Container	55 gallon container, POC, SWB, and other approved containers.
WCATS Questionnaire	A form used to document the composition of a TRU waste item. The form is used to facilitate Acceptable Knowledge and Chemical Compatibility Evaluation. This is form PA-FM-01016 in EDRMS.
Waste Generator	NPI-6 is designated to act as the waste generator in all activities and transactions related to management of waste from TA-55 FOD processes.
Waste Originator	Waste Originator is the PIC where the waste is generated.

3.2 Acronyms

Term	Definition
AK	Acceptable Knowledge
AKR	Acceptable Knowledge Report
AKS	Acceptable Knowledge Specialist
AKT	Acceptable Knowledge Technologist
BoK	Basis of Knowledge
CCP	Central Characterization Program
CFR	Code of Federal Regulations
CMR	Chemistry and Metallurgy Research (Facility)

3.2 Acronyms (continued)

Term	Definition
D	EPA hazardous waste number prefix for wastes with hazardous characteristics, defined in 40 CFR Subpart C, §§ 261.21 to 261.24
DOE	US Department of Energy
DOP	Detailed Operating Procedure
DP	Defense Program
EDRMS	Electronic Document Records Management System
EPA	US Environmental Protection Agency
EPC	Environmental Protection and Compliance (Division)
EPC-WMP	Environmental Protection and Compliance – Waste Management Programs Group
F	EPA hazardous waste number prefix for hazardous wastes from non-specific sources, defined in 40 CFR Subpart D, § 261.31
FLM	First Line Manager
FOD	Facility Operations Director
HAZMAT	Hazardous Materials
HWFP	Hazardous Waste Facility Permit
HWN	(EPA) Hazardous Waste Number
ID	Identification
K	EPA hazardous waste number prefix for hazardous wastes from specific sources, defined in 40 CFR Subpart D, § 261.32
KOP	Knowledge of Process
LANMAS	Local Area Nuclear Material Accountability Software
LANL	Los Alamos National Laboratory
LLW	Low-Level (Radioactive) Waste
MC&A	Material Control and Accountability
NCR	Nonconformance Report
NMED	New Mexico Environment Department
NPI-6	Hazardous Waste Management Group
NRC	Nuclear Regulatory Commission
P	EPA hazardous waste number prefix for acute hazardous waste defined in 40 CFR Subpart D, § 261.33(e)
PF-4	Plutonium Facility, Building 4
PS (code)	Process Status (code)
RCRA	Resource Conservation and Recovery Act
RLUOB	Radiological Laboratory Utility Office Building
SME	Subject Matter Expert
SNM	Special Nuclear Material
TA	Technical Area
TRU	Transuranic
TRUCON	Transuranic Waste Content (code)
TRUPACT	Transuranic Packaging And Container for Transport
UCNI	Unclassified Controlled Nuclear Information
US	United States
VE	Visual Examination
VI	Visual Inspection
WAC	Waste Acceptance Criteria
WAP	Waste Analysis Plan, Attachment B, to the <i>Hazardous Waste Facility Permit Issued to the Waste Isolation Pilot Plant</i> (EPA No. NM4890139088)

3.2 Acronyms (continued)

Term	Definition
WCATS	Waste Compliance and Tracking System
WIPP	Waste Isolation Pilot Plant
WMP	Waste Material Parameter
WMS	Waste Management System

4.0 RESPONSIBILITIES

4.1 Facility Operations Director

- Ensures that maintenance, construction, and D&D operations are accurately reflected in AK documentation by seeking NPI-6 AKS review when procedures, materials used, or other relevant factors change.

4.2 Programmatic, Facility, Construction, and D&D Personnel

- Work with NPI-6 to plan for the compliant documentation of waste generated by an ongoing, new, or changed project or activity, which may include:
 - Identifying wastes to be generated are fully characterized and have an available disposal path.
 - Estimating volumes of waste to be generated.
 - Notifying NPI-6 before processes or chemicals change that could affect waste characteristics.
 - Identifying and characterizing waste accurately and completely to ensure that regulated constituents in waste streams are identified and compatible.
 - Maintaining the characterization document through a formal system, such as an official memorandum or stand-alone document or (least preferably) an e-mail.
 - Notify NPI-6 of any new process status codes prior to waste being generated.

4.3 NPI-6 Group Leader

NOTE The LANL NPI-6 Hazardous Waste Management group leader oversees all components of the TRU waste management, characterization, certification with the Central Characterization Program (CCP), and work with NPI-7 for the transportation activities at LANL.

- Is the designated waste generator for facilities within the scope of this document
- Serves as the point of contact for personnel training, certification records, and waste disposal data
- Ensures that all wastes have an approved disposition pathway and adequate funding available for disposition before authorizing work that generates waste
- Ensures that all regulated waste is properly characterized, stored, and sent for disposal
- Ensures that corrective actions are implemented to resolve discrepancies/NCRs
- Approves all AKRs for publication
- Ensures that all records are submitted properly

4.4 First-Line Manager (FLM) for AK Management

- Ensures that AK activities are consistent with the LANL Hazardous Waste Facility Permit, Carlsbad Field Office, National TRU Program, and the WIPP Waste Acceptance Criteria (WAC) and Waste Analysis Plan (WAP), and Basis of Knowledge (BoK) requirements.
- Plans TA-55 FOD AK activities.
- Reviews the process AK documentation.
- Manages the AKS and AKT qualification program.
- Assigns qualified AKSs to establish and maintain AK documentation for each programmatic area within the scope of this document.

4.5 NPI-6 TRU Technicians

NOTE NPI-6 TRU Technicians are responsible for all TRU waste in the TA-55 FOD.

- Perform the day-to-day management of waste containers
- Communicate with AKSs and AKTs if field observations indicate that programmatic operations have changed
- Prevent prohibited items from being introduced into the WIPP or other disposal site waste streams
- Maintain required records, including in WCATS
- Physically close waste containers

4.6 NPI-6 AK Technologist

- Will be present during VI, VE, bagout and drum loading activities and complete WCATS Questionnaires and update WCATS.
- Applies RCRA codes
- Generates the Waste ID
- Ensures chemical compatibility
- Ensures prohibited items are rejected
- Pauses work when an AKS is needed for consultation on difficult items/situations
- Is present during absorptions emanating from PA-DOP-01665
- Assign a close date for containers in WCATS
- Maintains qualifications

4.7 NPI-6 AK Specialist

- Is responsible for all AK Technologist responsibilities (see Section 4.6)
- Conducts research, testing, and analysis as needed
- Compiles source documents and updates the AK reports as needed
- Coordinates and plans neutralization/absorption with customers following PA-DOP-01665 and EPC-WMP
- Performs walkdowns as necessary.
- Performs Derivative Classification of documents
- Verifies RCRA permit compliance and appropriate RCRA code assignments for waste streams in WCATS
- Presents briefings and topic presentations as needed

4.8 CCP Visual Examination Expert

- Is responsible for the overall direction and implementation of the VE process.

4.9 Quality Assurance Specialist

- Documents receipt inspections for quality affecting containers and other equipment
- Conducts independent surveillances on operations
- Manages nonconformance reports in accordance with this document and P330-6, *Nonconformance Reporting*.
- Reviews and completes Quality Assurance checklist for every container in WCATS

5.0 PERFORMANCE

5.1 Performing a Pre-Visual Inspection of Items

[1] IF an item can be safely disassembled into pieces that fit into a 55-gallon container, standard waste box (SWB), or other approved containers, THEN advise the waste originator contact person to disassemble the item.

- IF an item is TRU AND too large to fit in an SWB, THEN contact NPI-6 group management for guidance.
- IF an item is NOT TRU, and is instead LLW, THEN contact the NPI-6 LLW team.

5.2 Performing a Visual Inspection

NOTE 1 When performing visual inspection of liquids, the FLM or AKS is to be consulted for guidance as needed.

NOTE 2 Waste items that are considered Non/Routine or Non/Routine Programmatic waste are reviewed on a case-by-case basis by the AK Technologist. The AK Technologist completes the WCATS Questionnaire, PA-FM-01016, which can be located in EDRMS. NPI-6 personnel use the information on the form to document waste characteristics, initial compatibility determination, and the EPA hazardous waste codes assigned to the item, if any, in WCATS.

NOTE 3 The following steps are performed by NPI-6 personnel and waste-originator contact persons at the waste-generation site.

NOTE 4 The FLM determines whether or not the discrepancy can be resolved by the contact person, or if the discrepancy must be documented as a nonconformance.

[1] IF waste items fail to meet the VI criteria in the steps below, THEN contact FLM to determine necessary action.

[2] Verify the following for the waste:

- A process status (P/S) code exists for the process that generated the waste.
- The waste contains only those EPA hazardous waste number (HWN) codes listed for the assigned P/S code.

NOTE The VI is documented in WCATS using hand-held data devices. The NPI-6 AKT will provide a waste item identification (ID) to the originators after the physical VI is completed on the WCATS.

[3] Log onto the WCATS system using Z# and password.

NOTE The WCATS creates a unique item ID. NPI-6 personnel are the only authorized delegates to enter all applicable information on WCATS.

5.2 Performing a Visual Inspection (continued)

- [4] Create a new waste item in WCATS, if necessary, or access an existing waste item, if the waste item ID is already created.
- [5] Properly characterize and describe the waste as follows:
- IF a certain field is NOT applicable,
THEN enter N/A.
 - Utilize WCATS Questionnaire for VI of Routine and Non/Routine waste items.
 - Enter Hazardous or Nonhazardous process status code based on the results of AK documentation and AK profiles in WCATS. (The waste originator provides this information to the AK Technologist for routine waste items).
 - Select the waste matrix based on the Discard Matrix Codes in WCATS.
 - Verify through VI and Appendix 1, *Transuranic Waste Matrix Mixing* that the correct waste matrix is recorded.
- [6] IF the waste contains any of the following prohibited items,
THEN contact the originator for remediation:
- Hazardous constituents not listed in the Hazardous Waste Constituents Acceptable at WIPP
 - Non-TRU hazardous waste (i.e., less than 500,000 disintegrations per minute [dpm])
 - Nonradioactive pyrophoric materials
 - Pyrophoric radioactive materials (e.g., plutonium and uranium metal) are limited to less than 1 wt% of the package and must be generally dispersed
 - Sealed Containers ≥ 4 liters
 - IF the originator has an item in a can ≥ 3 liters,
THEN ensure the lid being used has a carbon filter installed.

NOTE Filtered lids may be obtained from the warehouse by the originator for the various cans ≥ 3 liters. The originator is responsible for obtaining filters.

- IF the waste is characterized by CCP using VE,
THEN the CCP VE expert can use knowledge of the waste-generating process and the method used to close containers to ensure that sealed containers ≥ 4 liters are not present.
- IF the originator has an item in a can ≥ 4 liters,
THEN ensure they perform one of the following:
 - Vent the can using a carbon filter.
 - Close can using “X” taping verifying the can is not sealed.
 - IF a container or item is sealed,
THEN ensure the item is vented. **DO NOT** accept the item if it is not vented.

5.2 Performing a Visual Inspection (continued)

- Compressed gases-containers must be punctured or the valve must be wired open and the wire left in place to enable RTR visibility.
- DOT Oxidizers or other ignitable materials (i.e., EPA hazardous waste [HW] code D001)
- Corrosive liquids (e.g., pH < 2 or > 12.5) (EPA HW code D002)
- Explosives or reactive chemicals (EPA HW code D003)
- Polychlorinated biphenyls (PCBs) in concentration 50 ppm
- Measurable tritium-contaminated TRU waste

NOTE 1 TA-55 policy prohibits any free liquids in a TRU waste container. All liquids must be absorbed or solidified according to PA-DOP-01665, *Characterization and Absorption of Liquids*.

NOTE 2 The LANL HWFP and RCRA regulations prohibit "treatment" without a permit, unless specific exemptions are met. Any questions regarding implementation or interpretation of these requirements should be addressed by EPC-WMP.

[7] IF a container is non-transparent and liquid is detected by shaking,
THEN assume the container contains some quantity of liquid.

[8] Ensure that the following waste types are segregated:

- Combustibles from non-combustibles – a minor amount of approximately 10% of combustibles by volume would be acceptable in otherwise non-combustible matrix and vice versa.
- Contact-handled (CH) TRU waste from remote-handled TRU waste
- ^{239}Pu from ^{238}Pu (primary isotope), when possible
- Asbestos-containing waste from all other waste (i.e., asbestos containers must be marked appropriately)

5.2 Performing a Visual Inspection (continued)

- NOTE** Small quantities of Special Nuclear Material (SNM) may be contained in or found in oversized waste items that do not fit into waste containers approved for shipment to WIPP (e.g., 55-gallon containers and SWBs). Those oversized waste items are normally kept in the PF-4 basement storage areas until they can be either size reduced/decontaminated (i.e., by originator) within PF-4 or shipped offsite for storage and size-reduction.
- [9] Measure the waste items to determine if it fits into an approved, oversized-waste container or other approved container or if it can be size-reduced to fit into a 55-gallon container.
- Auxiliary equipment, small equipment, loose items, and appliances are disconnected, if possible
 - Unnecessary supporting structures are removed
 - Liquids are drained from all piping
 - Ensure the originator drained and filled the pumps with an approved absorbent.
- NOTE** It is permissible to collect an estimated waste item weight after the packaging procedure by the following ($\text{Gross Weight} - \text{Tare Weight} = \text{Net Weight}$). All waste items weights must be recorded in kilograms (kg).
- [10] Enter the estimated item weight on the appropriate WCATS screen.
- [11] Add any comments necessary for clarification or supplemental information in the Comments field of the WCATS.
- NOTE** The WCATS assigns a waste item identification number (i.e., Item ID). Electronic signatures of NPI-6 personnel indicate the waste was properly characterized.
- [12] Notify the originator with the waste item ID and provide labels with the waste item ID.
- NOTE** Only the waste items identified by the same waste item ID are placed in a transfer container or Waste Container prior to NDA.
- [13] Ensure the waste-originator contact person is aware of the following responsibilities:
- marking the waste item with the waste item ID assigned by WCATS,
 - ensuring integrity and proper custody of the item during assay,
 - maintaining the integrity and custody of the waste from the point of inspection to the bagout or in-line packaging of the waste, and
 - marking the waste item ID on the transfer container.
- [14] Ensure waste items are packaged properly by originator.
- NOTE** The applied TID maintains the integrity of the certification driven by this procedure. When a TID is not placed on an item, waste will need a new VE before packaging.
- [15] Ensure tamper-indicating device (TID) is applied to the waste container by the appropriate MBA users.

5.3 Application of EPA Hazardous Waste Number (RCRA Codes)

NPI-6 has published eight Process Acceptable Knowledge Reports (AKRs). Each process AK report contains information on multiple individual processes that are assigned unique identifiers called process/status (P/S) codes. The compilation of AK information was based on P/S codes because that is the most detailed level of process information generally recorded in waste generation records.

The assignment of EPA hazardous waste numbers, often referred to as RCRA codes, is summarized in each of the process AK reports. The published AK reports are:

- TA55-RPT-001, *Process Acceptable Knowledge Report for Chloride Operations at TA-55*
- TA55-RPT-002, *Process Acceptable Knowledge Report for Metal Operations at TA-55*
- TA55-RPT-003, *Process Acceptable Knowledge Report for Miscellaneous Operations at TA-55*
- TA55-RPT-004, *Process Acceptable Knowledge Report for Nitrate Operations at TA-55*
- TA55-RPT-005, *Process Acceptable Knowledge Report for Pyrochemical Operations at TA-55*
- TA55-RPT-006, *Process Acceptable Knowledge Report for Special Processing Operations at TA-55*
- TA55-RPT-007, *Process Acceptable Knowledge Report for Plutonium-238 Operations at TA-55*
- TA55-RPT-009, *Process Acceptable Knowledge Report for RLUOB Operations*

The NPI-6 AK Technologist, utilizing WCATS, will select the appropriate process status code, which will then assign the appropriate EPA HWN.

5.4 Chemical Compatibility

The DOE Carlsbad Field Office will use a Chemical Compatibility Evaluation and the BOK for evaluating chemical compatibility within waste streams. The WCATS Questionnaire will be used by the AK Technologist to facilitate AK and chemical compatibility evaluation. The AKT will only make a chemical compatibility determination for those similar items that have been previously evaluated and approved by the AKSs.

5.5 Absorbing Liquids

Absorbing liquids will be done in accordance with PA-DOP-01665, *Characterization and Absorption of Liquids*, ADESH-AP-TOOL-901, *Elementary Neutralization*, ADESH-AP-TOOL-902, *Sorption w/out a Permit*, and EPC-WMP guidance.

It is the AK Technologist's responsibility to coordinate and plan neutralization/absorption with customers following PA-DOP-01665. The AK Technologist will be present during the absorption process and will consult with the AK Specialists as necessary.

6.0 REFERENCES

Document Number	Title
ADESH-AP-TOOL-901	<i>Elementary Neutralization</i>
ADESH-AP-TOOL-902	<i>Sorption w/out a Permit</i>
CCP-PO-001	<i>CCP Transuranic Waste Characterization Quality Assurance Project Plan</i>
EPA ID number NM0890010515	<i>LANL Hazardous Waste Facility Permit</i>
P330-6	<i>Nonconformance Reporting</i>
PA-AP-01146	<i>Acceptable Knowledge Documentation Procedure</i>
PA-DOP-01665	<i>Characterization and Absorption of Liquids</i>
TA55-RD-539	<i>TA-55 FOD Waste Management Requirements</i>
TA55-RPT-001	<i>Process Acceptable Knowledge Report for Chloride Operations at TA-55</i>
TA55-RPT-002	<i>Process Acceptable Knowledge Report for Metal Operations at TA-55</i>
TA55-RPT-003	<i>Process Acceptable Knowledge Report for Miscellaneous Operations at TA-55</i>
TA55-RPT-004	<i>Process Acceptable Knowledge Report for Nitrate Operations at TA-55</i>
TA55-RPT-005	<i>Process Acceptable Knowledge Report for Pyrochemical Operations at TA-55</i>
TA55-RPT-006	<i>Process Acceptable Knowledge Report for Special Processing Operations at TA-55</i>
TA55-RPT-007	<i>Process Acceptable Knowledge Report for Plutonium-238 Operations at TA-55</i>
TA55-RPT-009	<i>Process Acceptable Knowledge Report for RLUOB Operations</i>

7.0 RECORDS

All records are maintained electronically in the WCATS system.

8.0 APPENDICES AND ATTACHMENTS

Appendix	Title
1	<i>Transuranic Waste Matrix Mixing</i>

Attachment	Title
None	

Appendix 1, Transuranic Waste Matrix Mixing

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Transuranic waste matrices, types of assays, and recommendation on matrix mixing in a drum at TA-55			
Non-combustibles		Combustibles	
Heterogeneous (Debris)		Heterogeneous (Debris)	
Neutron instrument assay:		Gamma instrument assay:	
	Metals (IRN, ALM, MET)		Combustibles (COM)
	Glass (GLS)		Plastics (PLS)
	Graphite (GRA)		Rags (RAG)
	Glovebox sweepings (SWP)		Spent Resin (RES)
	Discard solids (DS)		Rubber gloves (RUB)
	Iron based HEPA filters (HEP)		Rubber (RUB)
	Leaded gloves (GLV) *Exception - normally measured by neutron measurement and managed as combustible		Filters combustibles (PLS, FIL)
	Cemented Material (CF)		Glass (GLS) (measured on gamma, can be mixed with combustibles so long as combustible volume exceeds the volume of glass)
			Cemented Material (CF)
Homogeneous		Homogeneous	
Neutron instrument assay:		Gamma instrument assay:	
	Salt (CHL, HYD, SSC, OX, SS, LS)		Absorbed organic liquids (ORG)
Gamma instrument assay:			
	Ash (ASH)		
Cans 3 liters or larger must be filtered.			
Liquids in pump cavities must be drained. Liquids which are poured out must not drain back to form a pool of liquid later.			
No more than 10 leaded rubber gloves per drum. Exceed this limit only if CCP (Central Characterization Project) performs Visual Examination.			
Do not squash leaded rubber gloves with waste placed on top.			
<p>It is permissible to add minor volumes of homogeneous waste items with large volumes of debris (heterogeneous) drum.</p> <p>Therefore, small volumes of absorbed organic liquids, spent resins, salts, or ash can be discarded in a drum which contains significantly more volume of heterogeneous waste items such as combustibles, metals, graphite, glass or filters provided the NDA measurements for waste items are similar and not have any issue with confirmation of the drums.</p> <p>For example, it is permissible to have approximately 10% of salt volume in a drum which has 90 of metals or glass volume.</p>			
CAUTION: Do NOT mix minor volume of debris (heterogeneous) waste in major volume of homogeneous waste.			